

Researchers protest defense research



UPI

DuBridge: Scientists are patriotic.

There is a gap between the consciences of many American scientists and the Government that supports the bulk of their research. Presidential Science Adviser Dr. Lee A. DuBridge has declared among his principal functions the closing of the gap.

The Nixon Administration has already taken steps designed to mollify increasingly alienated segments of the scientific community; the addition of \$10 million in basic research funds to the National Science Foundation in an effort to ease research crises on many campuses was such a move.

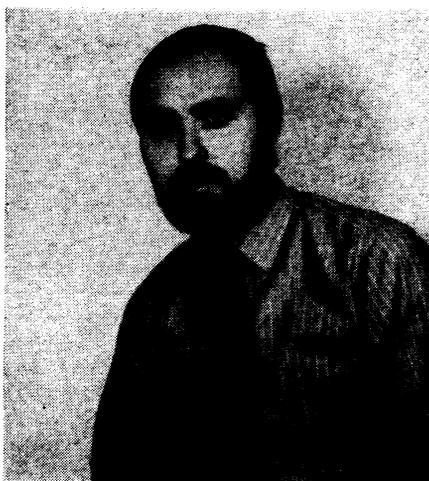
"I believe most scientists are patriotic," Dr. DuBridge says. But the palliatives do not quite speak to the disaffection among many scientists. That became evident last week when scientists on some 50 campuses declared a one-day moratorium on research, to discuss the ways in which science is being misused.

The day of symposia, called in some quarters a research strike, was less than a total shutdown: the University of Pennsylvania declared a holiday, but no other institution was closed, not even the Massachusetts Institute of Technology, where what was called the March 4 Movement began.

And that the gap does not embrace all scientists was evidenced at the Government's Argonne National Laboratory, near Chicago, where some 80 of 1,300 workers staged a work-in, laboring through a 16-hour day in their laboratories as evidence of their feelings.

But an estimated 50,000 students across the country did participate.

Though the auditorium at MIT was jammed with researchers on symbolic holiday, one straightforward patriot did manage to claim the microphone long enough to sing a verse of "God Bless



Schwartz: It's humanity that pays.

America." He was roundly applauded.

The targets were largely overkill and underconcern with the quality of human life.

At the University of California at Berkeley, physicist Charles Schwartz denounced the policies that set the direction for scientific research. "The big loser," he declared, "is the human race, which has never been so afraid."

Schwartz was followed to the podium by another physicist, Dr. Charles H. Townes, who has been a scientific talent scout for President Nixon.

MEDICAL SAFETY

Accidents spur legislation

One of the first bills to have been introduced in the 91st Congress was H.R. 830, "to create a national commission to study quality controls and manufacturing procedures of medical devices. . . ." It has marched up Capitol Hill before.

The Food and Drug Administration has been trying for years to get control of hospital instruments that are presently uncontrolled and which can be dangerous as well as ineffective. But no hearings were held on previous bills; all have died in committee. Nevertheless, the effort to control medical devices by some of the same regulations that govern new drugs, is continuing. And it is not only the devices themselves.

The National Academy of Sciences and National Research Council back in May 1968, pointed out that "few hospitals have a safe electrical distribution system: overloading is the common characteristic." But this is not the only danger. Inexperienced personnel sometimes pressed into service can be dan-

gerous, and there are increasing reports of shock, burn, electrocution or explosion stemming from the use of electrical appliances.

Urging that scientists "do their homework and think and be ready" to push public policies in desired directions, Dr. Townes declared that "most people in Government are well-meaning and trying to do useful things."

"This doesn't mean they are always right, in fact it sometimes seems they are always wrong, but when you stand in the middle of them and understand the complexities of their problems, you reach a new understanding."

Back in Massachusetts, Dr. Howard Zinn, professor of government at Boston University, took a dimmer view. "We want to be able," he said, "to bring children into this world in good conscience," meaning a world in which air and water are not polluted, urban centers are not decaying, and there is no threat of nuclear holocaust.

Many of the speakers across the country addressed themselves to the uses of the money now being spent on the Vietnam War when that unpopular struggle is over.

On the same day, in Washington, Senator George S. McGovern (D-S. Dak.) introduced a bill that would establish a national commission to deal with the conversion to a peace-time economy. Its aim, he said, would be to bring "the human, physical and financial resources no longer necessary to the military into quick focus on the domestic challenges we so desperately need to meet."

"We must begin without delay."

It is impossible to get accurate statistics; as one Boston anesthesiologist says, "death from fibrillation induced by current from a heart catheter is indistinguishable from death by natural causes."

Instrument makers are the principal targets of the attack. Out of the present lack of enforced standards, the Underwriters Laboratories Inc., has demanded changes in the design of instrumentation systems.

Paul Stanley, a physicist at Purdue University, says in ELECTRONICS magazine, there should be a careful study to determine the dangers from poorly designed or operated equipment. He suggests a re-evaluation of the body's sensitivity to electric shock, particularly in regard to maximum safe currents, along with studies to find out whether a damaged heart is more susceptible to electric shock than a healthy heart.

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The new bill introduced by Rep. Don Fuqua (D-Fla.) would establish a National Medical Devices Standards Commission composed of 20 members appointed by the President. There would be four representatives from private industry engaged in the manufacture of medical devices, four from universities and/or private laboratories engaged in research on medical devices, four from the private practice of medicine, four from other Government agencies dealing with public health, medical research and food and drug control, and four members of Congress, two from each house, representing both parties.

This commission would review present standards and quality controls used in the manufacturing and distribution of medical devices, surgical instruments, artificial organs and limbs, therapeutic instruments and devices, and other medical and hospital equipment.

It is not all the control FDA has sought in the past, but the agency would accept it as a start. ◇

CHANGING SPOTS

Hickel backs strong pollution bill

Walter J. Hickel didn't come into his job as Secretary of Interior on a tidal wave of acclaim.

There was a howl almost of disbelief when the former Alaskan Governor was nominated by President Nixon. In recent years conservationists and outdoorsmen have come to think of the Interior Department as their home in Washington. The department is, in fact, that branch of the Federal Government most directly concerned with both the protection and exploitation of the environment.

In light of this, Hickel's background as the development-oriented governor of the frontier state of Alaska was understandably controversial (SN: 2/1, p. 110). His nomination was opposed without hesitation by the Sierra Club and other conservation groups, and he was the only cabinet designee whose nomination met challenge in Congress.

Sen. Edmund S. Muskie (D-Maine) was one of those who seriously questioned Hickel's broadness of view and other qualifications for the job. But last week, following the secretary's testimony before the Senator's air and water pollution subcommittee, Muskie was saying that Hickel's attitude on pollution is "positive and constructive. . . . I am delighted."

Perhaps stung by repeated accusations that he would be soft on industrial pollution, Hickel cracked down hard on oil companies after a runaway offshore well near Santa Barbara blackened the California coast (SN: 3/1, p. 208). He issued an order holding oil compa-

nies responsible for any pollution from wells drilled on the continental shelf beyond the three-mile limit. The responsibility would be unlimited and negligence would not be a factor.

The pollution subcommittee chaired by Muskie currently is holding hearings on a bill which is a substitute for a Muskie proposal passed last year by the Senate but rejected by the House. Hickel's crackdown order embodies many of the features of the tougher, rejected bill.

"I have a personal commitment to preserve and enhance the nation's water quality," Hickel declared before the subcommittee. "I am convinced that with proper administration, adequate financing, and good, tough enforcement the objectives as outlined by Congress (in the Water Quality Act of 1965) can be attained."

Turning to Muskie's bill, he said he endorses it in general but "we believe that it should be strengthened in several major respects."

The principal point at which he would strengthen it is expanding it to include other hazardous substances, in addition to oil, which a firm might be compelled to clean up. He would like it to cover installations such as oil drilling rigs as well as vessels when these are located over the outer continental shelf. And he would like it made plain that there is a prima facie case for liability in the event of a discharge, so that the burden of proof of negligence is not on the government.

"Secretary Hickel's strong and unqualified endorsement of the water quality improvement acts is heartening," Muskie said last week. Noting that the Senate passed the similar bill last year that was rejected by the House, Muskie added, "I hope that the secretary now will press his views in the House as strongly as he has in the Senate."

Sen. William B. Spong Jr. (D-Va.), a member of the subcommittee and a co-sponsor of the bill, said he is pleased by Hickel's testimony.

Despite the official pleasure, there is a good measure of doubt among some Senators who don't believe anyone can that completely change spots, at least not so quickly. Somewhat cynically, they point out that Muskie, burned in the House on a stronger bill last year, already has as tough a bill as he thinks will go through. Thus he is unlikely to embody the secretary's proposals for strengthening it, so Hickel had little to lose by making such proposals.

Members of the subcommittee, at the same time, are disturbed that the Geological Survey has gone unscathed by Hickel after the Santa Barbara oil disaster, even though, they feel, the agency acted throughout as an arm of the oil industry.

DRUGS

Unpredictable dosages

It is widely assumed that the recommended or prescribed dose of a particular drug allows for a large margin of safety before the overdose level is reached. Most people at one time or another have exceeded what they know is the correct dose in order to obtain relief a little faster, or because they can't remember having taken their pill.

In fact, depending on the drug and on the individual's susceptibility to it, even far less than the recommended dose can be an overdose. The whole idea of a drug dose which will produce a predictable result in anyone who takes it is a myth (SN: 6/29, p. 614).

The latest in a series of surveys showing adverse drug effects from Ireland turned up:

- A man who took a five-milligram tablet of an anticoagulant because he had run out of the three-milligram tablets prescribed; he found himself in the hospital a few days later with nose-bleed and vomiting of blood.

- A woman with bronchial asthma who was admitted to the hospital with heart palpitations after she had used, contrary to instructions, an isoprenaline spray repeatedly for several hours.

- An asthmatic, a 29-year-old man who had been taking 50 percent more than his prescribed dose of methylprednisolone to obtain relief from wheezing. He came to the hospital with changed personality, considerable weight gain from fluid retention and other effects.

In the past five years at least nine surveys have been made in this country, Canada and North Ireland to discover the incidence of adverse drug reactions.

In the latest survey, Drs. O. L. Wade and Natalie Hurwitz, both of the Queen's University of Belfast, found adverse reactions in persons who had taken digitalis preparations, antibiotics, pain killers, corticosteroids and anticoagulants in their survey of 1,268 patients. They studied these reactions in two hospital wards, one in the Belfast City Hospital, a general hospital and in an institution for the mentally ill.

Adverse drug reactions in this survey totalled 118, they report in the March 1 BRITISH MEDICAL JOURNAL. In a previous study at Grace New Haven Community Hospital, by Yale University over eight months, 103 patients developed reactions out of a total of 1,814. The largest number of reactions was 772 at Philadelphia hospitals, where 86,100 patients were studied over a period of two years. Johns Hopkins reported 97 adverse reactions in a study of 714 persons, and Mary Fletcher Hospital in Burlington, Vt., had 98 reactions out of 9,557 patients studied. ◇